

NASA TECH BRIEF



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Saran Film Is Fire-Retardant in Oxygen Atmosphere

Saran, a commercially available polyvinylidene chloride copolymer, which forms heat shrinkable films that do not support combustion in air (2.9 psia oxygen partial pressure), was tested for flammability as a wrapping on electrical wire bundles in oxygen gas at pressures of 7.5 psia and 14.7 psia (1 atmosphere).

Several tests in the oxygen atmospheres were made on specimens of saran heat shrinkable sleeving on TFE-insulated electric wire. At 14.7 psia oxygen, the saran on test specimens in a horizontal position extinguished fires started in the TFE coating; the saran on specimens in a vertical position was consumed. In runs in which TFE-coated wire was overheated by electric current, saran sleeving reduced the rate at which the TFE insulation was consumed. The saran

wrapping was self-extinguishing in fires in 7.5 psia oxygen except when polyethylene heat shrinkable sleeving was also used.

Note:

Complete details may be obtained from:
Technology Utilization Officer
Manned Spacecraft Center
Houston, Texas 77058
Reference: B68-10177

Patent status:

No patent action is contemplated by NASA.

Source: J. T. Goodwin and W. R. Herrera
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